

2017
Village of Liberty
Annual Drinking Water Quality Report
Fed ID # NY5203329

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process, protection of our water resources and inform you on completed system upgrades. We are committed to ensuring the quality of your water. Our water source during 2017 has been the Lily Pond Water Filtration Plant and the Elm St. well. The New York State Department of Health had conducted a "Source Water Assessment". Enclosed is a copy of the summary. Any questions, feel free to contact our office or The Department of Health. We have an aquifer protection ordinance available from our office that provides more information, such as potential sources of contamination and describes restricted uses.

This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact The Village of Liberty Water Department at 845-292-6420. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second Monday of each month at 7:00 PM in the Boardroom at the Village Municipal Building, 167 North Main Street, Liberty, New York 12754.

One improvement that continues to take place in our distribution system is the continued up-grade of our water meters. We have been changing out meters and installing new remote read meters to streamline our reading of meters as well as billing.

During the year 2017 the Village water system's daily requirements were an average of 499,000 gallons, of which the Lily Pond Filtration Plant provided 78% of the total system demand. The Elm Street Well provided about 22% of the total system demand. The water usages are based on meter sales, calculated leak, fire use, and flushing. We currently have 1644 service connections and are serving 3900 people in and out of the Village. In 2017 the average homes water bill was \$66.78 per quarter.

While we are working steadily toward supplying all of our system needs from the Lily Pond Filtration Plant it is worth noting that the Elm St. well has not had a positive MTBE reading since December 4th 1998. The Village of Liberty System routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the past five years, as required by law. All drinking water, including bottled drinking water, may be expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

During 2017 we conducted Lead and Copper testing which is required every 3 years. Testing showed the 90th percentile results were above the current action levels (Copper = 1.3 mg/1 and Lead 0.015 mg). Please see the table below. The level presented represents the 90th percentile of the 40 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected in the water system. The lowest and highest sample results are also listed.

Water systems that exceed the lead or copper action level must also monitor for the following water quality parameters within the monitoring period when an action level is exceeded:

- lead; (entry point only)
- copper; (entry point only)
- pH; (measured on-site)
- alkalinity;
- calcium;
- conductivity;
- water temperature; (measured on-site)
- silica (when an inhibitor containing silicate is used); and

- orthophosphate (when an inhibitor containing phosphate is used)

Water quality samples are collected in accordance with the New York State Sanitary Code, Part 5, Subpart 5-1.43(a), and 5-1.43(b). For water systems serving a population of 3,301-1,0000 people, water quality sampling include two (2) water samples from three (3) distribution system sample sites and two (2) water samples from each entry point during each monitoring period when the system exceeds the lead or copper action level. The analysis of water quality samples collected at entry point must include lead and copper.

For additional information related compliance with the Lead and Copper Rule please visit the following:

<http://www.health.ny.gov/environmental/water/drinking/regulations/>

<https://www.epa.gov/dwreginfo/lead-and-copper-rule>

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. Village of Liberty Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Variations & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Action Level - the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a

Maximum Contaminant Level - (mandatory language) The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal - (mandatory language) The "Goal"(MCLG) is the level of a contaminant

in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Table of Detected Contaminants							
Contaminant	Date of Sampling	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
(1) Total Coliform Bacteria	2017	N	ND	Per 100 ML	0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment.
(2) Fecal coliform and <i>E.coli</i>	2017	N	ND	Per 100 ML	0	Any positive	Human and animal fecal waste
(3) Turbidity		N	.08	NTU	N/A	.300	Soil runoff
(4) MTBE (ELM ST. WELL)	2017	N	ND	Ug/l	0	.01	Octane boosting additive of gasoline
(7) Nitrate (as Nitrogen)	4/7/17	N	1.02	Mg/L	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
(9) TTHM (total trihalomehtanes)	3/9/17 6/15/17 9/28/17 12/14/17	(11) Y	Highest Running Annual Average: 59.5 max level detected: 86.9 lowest level detected: 27	Ug/L	0	80	By product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
(8) THAA (total haloacetic acids)	3/9/17 6/15/17 9/28/17 12/14/17	(11) Y	Highest Running Annual Average: 55 max level detected: 81.1 lowest level detected: 37.6	Ug/L	0	60	By product of drinking water disinfection needed to kill harmful organisms.
BARIUM	10/6/16	N	Elm St 0.16 Lily Pond 0.03	MG/L	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
NICKEL	4/6/17	N	Lily Pond 0.0005	MG/L	N/A	N/A	Erosion of natural deposits.
Arsenic	10/3/13	N	0.0010	Mg/L		0.010	Naturally Occurring
(10) SODIUM	10/05/17	N	48.7 Lily Pond 11.1	MG/L		See Notes	Naturally occurring; Road salt; Water softeners; Animal waste.
(6)(12) LEAD	5/18/17	N	90 th % = .00134 Range: 0-0.0942 Action level exceeded at 0 sites	MG/L	0	0.015	Corrosion of household plumbing
(6)(12) LEAD	10/17/17	N	90 th % = .000924 Range: 0-0.0406 Action level	MG/L	0	0.015	Corrosion of plumbing

(5)(12) COPPER	5/18/17	N	90 th % = 1.51 Range: 0.0113-2.13 Action level exceeded at 5 sites	Mg/L		1.3	Corrosion of plumbing
(5)(12) COPPER	10/17/17	N	90 th % = 0.735 Range: 0.00905-1.34 Action level exceeded at 1 site	Mg/L		1.3	Corrosion of household plumbing
P.F.O.S	12/12/17	N	2.61			70 PARTS PER TRILLION	MAN MADE CHEMICALS
P.F.O.A	12/12/17	N	N.D.			70 PARTPER TRILLION	MAN MADE CHEMICALS
CHROMIUM	WELL 10/3/13-10/6/16 PLANT 7/23/16-10/6/16	N N	WELL 0.001 PLANT 0.001			0.1 0.1	Naturally Occurring
FLUORIDE	WELL 10/3/13-10/6/16 PLANT 7/23/15-10/6/16	N N	WELL 0.10 PLANT 1.00			2 2	
SELENIUM	WELL 10/3/13-10/6/16 PLANT 7/23/15-10/6/16	N N	WELL 0.0051 PLANT 0.0051			0.05 0.05	Naturally Occurring
GROSS ALPHA	8/25/2016	N	WELL 0 +/-1.13	pCi L		15	Naturally Occurring
TOTAL URANIUM	3/9/16	N	Well 0.117+/-0.003	ug/L		30	Naturally Occurring
COMBINED RADIUM 226&228	3/19/16	N	Well 0.637+/-0.374	pCi		5	Naturally Occurring
GROSS BETA ALPHA PARTICLE ACTIVITY	3/19/16	N	1.11+/-0.859	millirem s		4	Naturally Occurring

SAMPLING VIOLATION

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether your drinking water meets health. Standards. During 2017 we had no bacteriological sample that was in violation in Village of Liberty.

- (1) **Total Coliform.** Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially – harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
- (2) **Fecal coliform/E.Coli.** Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.
- (3) **Turbidity.** constant monitoring annual avg. Turbidity has no health effects. However, turbidity can interfere with disinfections and

provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(4) Even though we currently do not exceed MTBE levels, the Village still continually monitors for MTBE and any of its associated compounds. At present we show no presence of MTBE.

(5) **Copper.** Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

(6) **Lead.** Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

(7) **Nitrate.** Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

(8) **HAA's [Haloacetic Acids]** Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

(9) **TTHMs [Total Trihalomethanes].** Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

(10) **SODIUM** Water containing more than 20mg/l of sodium should not be used for drinking by people on severely restricted sodium diets.

(11) Running annual average above exceedance of the MCL for two quarters

(12) The level presented represents the 90th percentile of the 20 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper or lead values detected in the water system.

What Does This Information Mean?

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. We constantly monitor the water supply for various constituents. We have **NOT** detected cryptosporidium in the water from the Lily Pond Water Filtration Plant. We have **NOT** detected this constituent in any of our samples tested. We believe it is important for you to know that cryptosporidium may cause serious illness in immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders. These people should seek advice from their health care providers.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Total Coliform: The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are

present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

Nitrates: As a precaution, we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

Lead: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

Our non-English speaking customers should contact the Village office for assistance in reading this report. This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

<p>Spanish Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.</p>	<p>French Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.</p>
<p>Korean 이쪽의 보고는 귀하에게 드리는 상수역 수질 문제를 알려 드린 것입니다. 바다 물을 취수한 바닷물 이므로 염분 이물질 등이 들어갈 수 있습니다. 정확한 정보를 받으십시오.</p>	<p>Chinese 這份報告含有非常重要的有關您喝的水的資料。請找能講這份報告的人翻譯或解釋給您聽。</p>

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer, undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

In closing we would like to take the opportunity to thank you for allowing us to provide your family with clean, quality water during the last year. We take pride in the water we produce and deliver to your homes and look forward to the improvements that will take place during 2017.

Please call our office if you have questions. You can also locate this [information via internet at www.libertyvillageny.org/minutesandnewsletters/newsletters](http://www.libertyvillageny.org/minutesandnewsletters/newsletters)

Village of Liberty Water Department